



Epidemiologic Notes & Reports

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Arthritis and Chronic Joint Symptoms— More Common Than Previously Thought

The first state-by-state survey of arthritis and chronic joint symptoms shows that one in three U.S. adults are affected, according to an October 2002 report from the Centers for Disease Control and Prevention (CDC). The new data put the number of adults with arthritis and chronic joint symptoms (CJS) at 70 million (33%), a substantial increase over the previous estimate that 43 million had arthritis. Researchers said the earlier estimate was probably too low and that arthritis-related questions on the new survey more accurately captured undiagnosed persons with chronic joint symptoms—pain, aching, stiffness, or swelling in or around their joints.

As part of the CDC's 2001 Behavioral Risk Factor Surveillance System telephone survey, more than 212,000 U.S. adults aged 18 years and older were asked if their doctor had ever told them they had arthritis or if they had chronic joint symptoms during the previous 12 months.

The percentages of people reporting arthritis and chronic joint symptoms varied widely among the states: Hawaii had the lowest rate (17.8%) and West Virginia had the highest (42.6%). Kentucky, with 41.1%, ranked second highest in the nation.

More women than men (37.3% and 28.4%, respectively) reported having arthritis and chronic joint symptoms. Whites (35.3%) and blacks (31.5%) were more likely to report them than Hispanics (23.3%) and other races or ethnic groups (27.8%). Of the 33% of American adults with arthritis and chronic joint symptoms, 10.6% reported doctor diagnosed arthritis, 10% reported chronic joint symptoms, and 12.4% reported both.

The CDC said the data will be invaluable to states in planning health

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services and arthritis intervention programs. The federal agency currently provides funds to 36 health departments to improve the quality of life of people with arthritis through state-based programs and to more broadly disseminate self-management techniques, including appropriate physical activity programs. (See page 2 for a list of CDC funded pilot project sites in Kentucky.) All 50 states conduct surveillance for arthritis and chronic joint symptoms in odd numbered years.

Encompassing more than 100 diseases and conditions that affect joints and other connective tissue, arthritis is the number one cause of disability among adults in the United States, according to the CDC. The new data confirm that arthritis and CJS are one of nation's "most common public health problems," the agency reported. The cost of this public health burden is expected to increase as the U.S. population ages.

The full report appears in the October 25, 2002 *Morbidity and Mortality Weekly Report* <http://www.cdc.gov/mmwr/>. For more information on arthritis, visit the CDC web site: <http://www.cdc.gov/nccdp/hp/arthritis/>. Also see the Arthritis Foundation web site: <http://www.arthritis.org/> and the National Institute of Arthritis and Musculoskeletal and Skin Diseases site: <http://www.niams.nih.gov>.

Doctor Diagnosed Arthritis or Chronic Joint Symptoms (Persons Age 18+ in Kentucky/2001)*

Kentucky	41.1%
Male	36.6%
Female	45.2%
White Non-Hispanic	41.9%
Black Non-Hispanic	34.2%
Hispanic	32.8%

*Source: Kentucky Behavioral Risk Factor Surveillance System, 2001.

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The smallpox vaccine helps the body develop immunity to smallpox. The vaccine is made from a virus called vaccinia which is a "pox"-type virus related to smallpox. The smallpox vaccine contains the "live" vaccinia virus—not dead virus like many other vaccines. For that reason, the vaccination site must be cared for carefully to prevent the virus from spreading. Also, the vaccine can have side effects (see the section "Smallpox Vaccine Safety" which follows). The vaccine does not contain the smallpox virus and cannot give smallpox to those who are vaccinated.

Currently, the United States has a large enough stockpile of smallpox vaccine to vaccinate everyone who might need it in the event of an emergency. Production of new vaccine is underway.

Length of Protection

Smallpox vaccination provides high level immunity for three to five years and decreasing immunity thereafter. If a person is vaccinated again later, immunity lasts even longer. Historically, the vaccine has been effective in preventing smallpox infection in 95% of those vaccinated. In addition, the vaccine was proven to prevent or substantially lessen infection when given within a few days of exposure. It is important to note, however, that at the time when the smallpox vaccine was used to eradicate the disease, testing was not as advanced or precise as it is today, so there may still be things to learn about the vaccine and its effectiveness and length of protection.

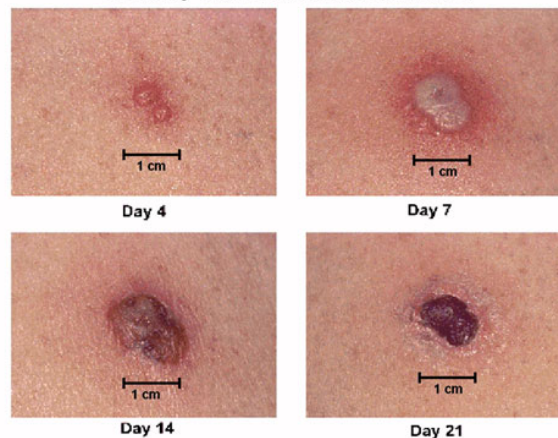
Receiving the Vaccine

The smallpox vaccine is not given with a hypodermic needle. It is not a "shot" as most people have experienced. The vaccine is given using a bifurcated (two-pronged) needle that is dipped into the vaccine solution. When removed, the needle retains a droplet of the vaccine. The needle is used to prick the skin 15 times in a few seconds. The pricking is not deep, but it will cause a sore spot and one or two droplets of blood to form. The vaccine usually is given in the upper arm.

If the vaccination is successful, a red and itchy

bump develops at the vaccine site in three or four days. In the first week, the bump becomes a large blister, fills with pus, and begins to drain. During the second week, the blister begins to dry up and a scab forms. The scab falls off in the third week, leaving a small scar. People who are being vaccinated for the first time have a stronger reaction than those who are being revaccinated. The following pictures show the progression of the site where the vaccine is given.

Primary Vaccination Site Reaction



Post-Vaccination Care

After the vaccine is given, it is very important to follow instructions to care for the site of the vaccine. Because the virus is live, it can spread to other parts of the body, or even to other people. The vaccinia virus may cause rash, fever, and head and body aches. In certain groups of people, complications from the vaccinia virus can be severe. (See "Smallpox Vaccine Safety" below.)

Benefit of Vaccine Following Exposure

Vaccination within three days of exposure will prevent or significantly lessen the severity of smallpox symptoms in the vast majority of people. Vaccination four to seven days after exposure likely offers some protection from disease or may modify the severity of disease.

Smallpox Vaccine Safety

The smallpox vaccine is the best protection if an individual is exposed to the smallpox virus. Anyone directly exposed to smallpox, regardless of health status, would be offered the smallpox vaccine because the risks associated with smallpox disease are far greater than those posed by the vaccine.

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There are side effects and risks associated with the smallpox vaccine. Most people experience normal, usually mild reactions that include a sore arm, fever, and body aches. However, other people experience reactions ranging from serious to life-threatening. People most likely to have serious side effects are: people who have had, even once, skin conditions (especially eczema or atopic dermatitis) and people with weakened immune systems, such as those who have received a transplant, are HIV positive, are receiving treatment for cancer, or are currently taking medications that suppress the immune system, e.g., steroids. In addition, pregnant women should not get the vaccine because of the risk it poses to the fetus. Women who are breastfeeding and children younger than 12 months of age should not get the vaccine. Also, the Advisory Committee on Immunization Practices (ACIP) advises against non-emergency use of smallpox vaccine in children younger than 18 years of age. In addition, those allergic to the vaccine or any of its components should not receive the vaccine.

In the past, about 1,000 people for every one million people vaccinated for the first time experienced reactions that, while not life-threatening, were serious. These reactions included a toxic or allergic reaction at the site of the vaccination (erythema multiforme), spread of the vaccinia virus to other parts of the body and to other individuals (inadvertent inoculation), and spread of the vaccinia virus to other parts of the body through the blood (generalized vaccinia). These types of reactions may require medical attention.

In the past, between 14 and 52 people out of every one million people vaccinated for the first time experienced potentially life-threatening reactions to the vaccine. Based on past experience, it is estimated that one or two people in one million who receive the vaccine may die as a result. Careful screening of potential vaccine recipients is essential to ensure that those at increased risk do not receive the vaccine.

Smallpox Vaccine Availability

Routine smallpox vaccination among the American public stopped in 1972 after the disease was eradicated in the United States. Until recently, the U.S. government provided the vaccine only to a few hundred scientists and medical professionals working with smallpox and similar viruses in research settings.

Following the terrorist events of 2001, the federal government took new actions to improve the nation's

level of preparedness. Among those measures was the issuance of smallpox planning guidelines to the states and other entities to address both impending and actual smallpox outbreaks.

Kentucky's Smallpox Vaccination Plans

As part of the nationwide vaccination planning effort, the Kentucky Department for Public Health has developed and submitted to CDC a "pre-event" vaccination plan to improve the state's preparedness to respond to an attack involving smallpox. The plan calls for the vaccination of more than 5,000 designated critical response volunteers in Kentucky (medical and disease investigation personnel and vaccination response team members who could be activated in the event of an intentional release of smallpox).

The department also prepared and submitted a smallpox response plan, sometimes referred to as the "post-event plan," which would go into effect to administer vaccine in the event of attack on the population.

Both plans will soon be available online at:

<http://chs.state.ky.us/KyHAN/default.asp>

In mid-December, CDC reported that a preliminary review of plans from around the country indicated that close to 450,000 voluntary public health and other health care personnel could be offered the vaccine when it becomes available. Plans call for hundreds of clinics to be set up to deliver the vaccine to those who choose to receive it.

What is a "live virus" vaccine?

A "live virus" vaccine is a vaccine that contains a "living" virus that is able to produce immunity, usually without causing illness. Because the virus in the vaccine is live, it can be transmitted to other parts of the body or to other people.

For most people with healthy immune systems, live virus vaccines are effective and safe. Sometimes a person getting a live vaccine has mild symptoms of the virus in the vaccine. Other live virus vaccines used in the U.S. include measles, mumps, rubella, and chickenpox.

Health Alert Network Enhances Bioterrorism Preparedness

The developing nationwide Health Alert Network (HAN) is an integrated information and communications system for CDC's bioterrorism and related initiatives to strengthen preparedness at local and state levels. HAN also serves as a platform for distribution of health alerts, dissemination of prevention guidelines and other information, distance learning, national disease surveillance, and electronic laboratory reporting.

When complete, the Health Alert Network will ensure:

- High-speed, secure Internet connections for local health officials, providing access to CDC's prevention recommendations, practice guidelines, and disease data; capacity for rapid and secure communications with first responder agencies and other health officials; and capacity to securely transmit surveillance, laboratory, and other sensitive data
- On-line, Internet- and satellite-based distance learning systems
- Methods of emergency communications that are fully redundant with e-mail (two-way radios, cell phones, wireless devices)
- Ongoing protection of critical data and information systems and capabilities for continuity of operations
- Electronic exchange of information in standard formats
- High levels of organizational capacity within the public health system.

Preparedness Through Partnerships

All 50 states have funding for HAN goals through Focus Area E of the "Public Health Preparedness and Response for Bioterrorism" cooperative agreements.

Within this program, CDC is partnering with local and state health agencies and national public health organizations to connect local health agencies to the Internet. CDC cooperative agreement funds are making possible the initial purchase and installation of electronic computing and communications equipment, including equipment for satellite- and Internet-based training.

The HAN initiative also will develop and deliver training in the use of information technology to prepare public health workers to respond to bioterrorist threats. It will develop electronic tools to support preparedness for and response to bioterrorism and other disease threats, and provide for rapid dissemination of health warnings.

HAN will aid in the deployment of authoritative preparedness, diagnosis, and treatment guidelines. The system also will be used to develop science-based, local health department performance standards related to domestic terrorism and other essential health services.

CDC is providing HAN funding and technical assistance to all 50 state health agencies, the District of Columbia, the territory of Guam and three metropolitan health departments (Chicago, New York, and the County of Los Angeles), as well as three "Local Exemplar Centers for Public Health Preparedness" and one "Specialty Academic Center for Public Health Preparedness."

—For additional information,
Call 770/488-2425 or visit www.phppo.cdc.gov/

Among the preparedness efforts of the HAN to disseminate information in Kentucky is the construction of website access to up-to-the-minute health alerts from CDC and the Kentucky Department for Public Health. Visit the website at:

<http://chs.state.ky.us/KyHAN/default.asp>

Arthritis and Chronic Joint Symptoms

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The Kentucky Department for Public Health is among the 36 state-based programs funded by the CDC to improve the quality of life of persons with arthritis. Funding of \$138,000, awarded to the Kentucky Department for Public Health for federal fiscal year 2002-2003, is supporting 10 Pilot Project Sites at the following locations:

- Purchase Health District
- Marshall County Health Department
- Allen County Health Department
- Jefferson County Health Department
- Woodford County Health Department
- Lexington/Fayette County Health Department
- Northern Kentucky Independent Health Department
- Buffalo Trace District Health Department
- Big Sandy District Health Department
- Pike County Health Department

Three additional Kentucky sites will be added during the current fiscal year.

Kentucky's Health Ranking—2002

Excerpts from UnitedHealth Foundation State Health Rankings 2002

The UnitedHealth Foundation's annual state health rankings for 2002 show Kentucky at number 39 in the nation. The foundation's report, released in November, states that the relative health of the state has changed slightly since 1990. Kentucky findings in the report, which is a collection of state-by-state snapshots of America's health, include the following:

"The state's strengths include a low violent crime rate with 295 offenses per 100,000 population, strong prenatal care with 80.2% of pregnant women receiving adequate care, and a low incidence of infectious disease at 15.3 cases per 100,000 population. Two large challenges," it elaborates, "are the prevalence of smoking at 30.9% of the population, the highest in the nation, and a high number of cancer deaths with 234.5

deaths per 100,000 population, the second highest in the nation. Risk for heart disease is also high at 20% above the average state and total mortality is high at 1,003.7 deaths per 100,000 population.

"Health disparity, as illustrated by prenatal care, is present within the state but is not as major an issue as in many other states. In the past year, premature death increased from 8,113 to 8,582 years lost before age 75 per 100,000 population. The uninsured population decreased from 14.5% to 12.3%.

"Since 1990, the relative health of the state has changed slightly as the percentage of children in poverty decreased from 23.7% to 16.8% of persons under age 18, and infant mortality decreased from 9.8 to 7.2 deaths per 1,000 live births."

America's Health: UnitedHealth Foundation State Health Rankings—Kentucky 2002

RANKINGS

MEASUREMENT DATA

2002	2001	1990	RISK FACTORS	2002	2001	1990
50	50	49	Prevalence of Smoking (% of population)	30.9	30.5	35.3
36	28	33	Motor Vehicle Deaths (per 100,000 miles driven)	1.8	1.7	2.6
15	15	19	Violent Crime (offenses per 100,000 population)	295	301	338
45	48	45	Risk for Heart Disease (% above or below national average)	20	19	8
34	36	42	High School Graduation (% of incoming 9th graders)	65.8	65.7	67.9
35	27	40	Children in Poverty (% of persons under age 18)	16.8	15.2	23.7
11	8	26	Adequacy of Prenatal Care (% of pregnant women)	80.2	80.9	69.7
23	28	37	Lack of Health Insurance (% without health insurance)	12.3	14.5	15.6
40	42	38*	Support for Public Health (ratio)	1.20	1.18	0.54*
OUTCOMES						
37	39	40*	Occupational Fatalities (deaths per 100,000 workers)	6.6	7.41	3.8*
49	49	47*	Limited Activity Days (days in last 30 days)	6.5	6.5	6.8*
47	46	47	Heart Disease (deaths per 100,000 population)	320.5	314.9	351.7
49	50	43	Cancer Deaths (deaths per 100,000 population)	234.5	234.4	213.0
18	15	19	Infectious Disease (cases per 100,000 population)	15.3	13.8	27.4
45	47	49	Total Mortality (deaths per 100,000 population)	1,003.7	984.1	962.1
29	29	23	Infant Mortality (deaths per 1,000 live births)	7.2	7.3	9.8
39	38	36	Premature Death (years lost per 100,000 population)	8,582	8,113	9,160
39	37	41	OVERALL			

*Data sources and/or methodology may not be comparable for this year.



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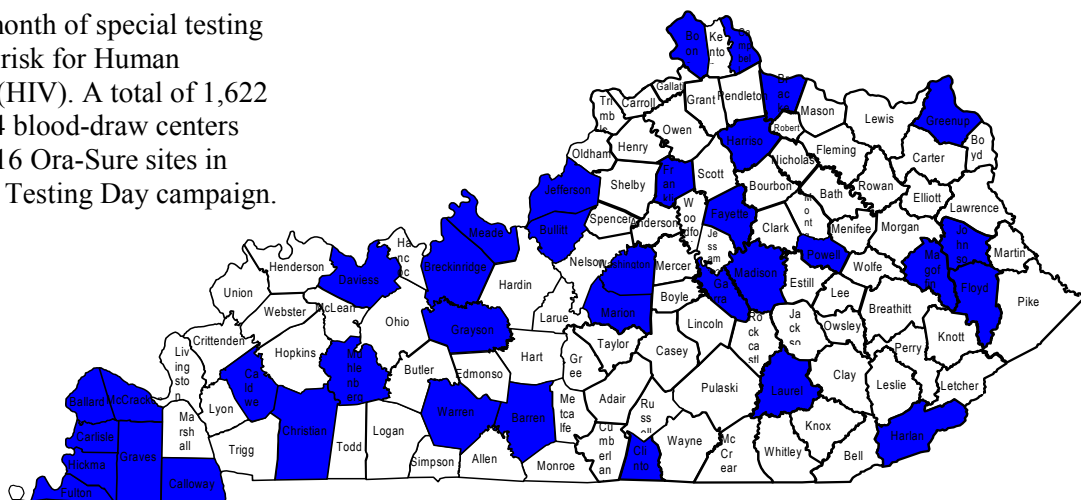
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Rice C. Leach, MD,
Commissioner, Department for Public Health
Steven J. Engler, MD, MPH,
State Epidemiologist and Director,
Division of Epidemiology and Health Planning
Molly M. Cone, Editor

RETURN SERVICE REQUESTED

Kentucky National Testing Day Campaign

June 2002 offered a full month of special testing events for Kentuckians at risk for Human Immunodeficiency Virus (HIV). A total of 1,622 tests were performed at 34 blood-draw centers (health departments) and 16 Ora-Sure sites in Kentucky's National HIV Testing Day campaign.



Of the 1,622 individuals who took the test, 1,109 returned for results, for an overall return rate of 68%. A return rate of 59% (660 out of 1,120 persons) was registered among those who had blood drawn in health department clinics. Two health departments experienced a 100%

return rate. Individuals tested in the field with OraSure had a return rate of 89% (449 of 502 persons). Nine of these sites posted a 100% return rate.

In the 2002 campaign, 554 persons indicated that they were they were first time testers.

The overall seropositivity rate in the testing effort was 1.17%, with a .63% rate (7 of 1,120 persons) from blood-draws and a 2.39% rate (12 of 502 individuals) for OraSure.

—By Tom Collins
2002 Testing Day Team Captain